

## CM62-EZ-II PRODUCT SPECIFICATIONS

System Type	6.5", coaxial, in-ceiling, sealed (32 W transformer for 25/70.7/100 V or transformer bypass)
Impedance (Nominal) <sup>1</sup>	16 Ω
Sensitivity dB @ 2.83 V/1 M	90 dB
Sensitivity dB @ 1 W/1 M <sup>2</sup>	90 dB
Frequency Response (±3 dB) <sup>3</sup>	125 Hz - 20 kHz
Frequency Response (±10 dB) <sup>3</sup>	65 Hz - 22 kHz
Max. Program Power <sup>4</sup>	100 W
Max Continuous Power RMS <sup>5</sup>	50 W
Max. Power SPL @ 1 M <sup>6</sup>	107 dB
Coverage Angle (±6 dB @ 2 kHz)	135°
Coverage Angle (±6 dB @ 10 kHz)	120°
Coverage Angle (Averaged 2-10 kHz)	80°
Directivity Factor (Q)	5.1 (Averaged 100 Hz - 10 kHz); 5 (2 kHz)
Directivity Index (DI)	6.2 dB (Averaged 100 Hz - 10 kHz); 7 dB (2 kHz)
Tap Selector	Six-position rotary switch with transformer bypass position
Transducer: Low-Frequency Driver	165 mm (6.5") treated fiber cone, cloth surround
Transducer: High-Frequency Driver	25.4 mm (1") silk dome tweeter
Low-Frequency Voice Coil	25.4 mm   1"
Crossover Frequency	4.0 kHz
Network Type: Low Pass	12 dB per octave, 2nd order
Network Type: High Pass	6 dB per octave, 1st order
Enclosure Alignment	Sealed
Enclosure Material	Drawn steel backcan with ABS baffle
Grille	Painted steel
Inputs	4 position ceramic terminal strip
Backcan Diameter	245.6 mm   9.67"
Backcan Height	146.1 mm   5.75"
Visible Diameter	298.5 mm   11.75"
Visible Height	8.6 mm   0.34"
Mounting Hole Diameter	266.7 mm   10.5"
Min. / Max. Ceiling Thickness	0.9 mm   0.035" - 40.6 mm   1.6"
Weight	3.6 kg   8 lbs
Packaging	One per box
Included Accessories	Tile bridge, UL-listed flex conduit clamp, paint shield, hole template, and wire nuts
Optional Accessories	Pre-construction bracket (AC-CMEZ-6/8-PCB), junction box (AC-CM-EZ-JBOX)
IP-Rating	IPX3
Certifications	CE, EN54, RoHS, UL1480A, UL2043

<sup>1</sup> Impedance listed per IEC 60268-5

<sup>2</sup> 1 W/1 M sensitivity determined using nominal impedance

<sup>3</sup> Frequency response measured in half or full space as dictated by speaker mounting configuration

<sup>4</sup> Max program power is 3 dB above max continuous power

<sup>5</sup> Continuous power rating, EIA-426-B test

<sup>6</sup> Max output based on max continuous power



### Description

The CM62-EZ-II is a 6.5", coaxial, two-way, blind-mount, in-ceiling speaker which delivers true high efficiency and performance across the operating bandwidth. By incorporating a 6.5-inch treated-fiber driver with cloth surround in a sealed drawn steel backcan, this speaker delivers maximum frequency response (65 Hz - 22 kHz, ±10 dB) in a compact design.

Mounting hardware is included and features a constant-tension winged mounting system with a 21-gauge "full metal" steel tile bridge ensuring rapid and secure installation in any sheetrock or drop-tile application. For easy ordering, stocking and installation, this series includes a color-coded (green) tile bridge, optional pre-construction bracket, and a six-position tap switch for 25, 70.7, and 100 V applications and 16 Ω transformer bypass.

### Features

- One 6.5" (165 mm) treated fiber woofer with cloth surround and one 1 inch (25.4 mm) silk dome tweeter
- Easy-access six-position tap switch for 25/70.7/100-volt and 16 Ω transformer bypass position allows for easy ordering, stocking, and installation
- Reduced amplification costs with maximum efficiency including 90 dB sensitivity and 16 Ω impedance
- Superior voice intelligibility with a 10 kHz coverage angle of 80° (Independently verified)
- Incorporates a painted steel grille for lasting durability
- Adaptable to material thicknesses ranging from 0.04 in (0.9 mm) to 1.60 in (40.6 mm)
- UL1480 (UEAY) and 2043, CE (EMC Directive 89/366/EEC, EN55020, EN55013) approved
- High-quality black or white painted finish. Custom colors available
- Included accessories: tile bridge, UL-listed 0.5-inch flex conduit clamp, paint shield, and two wire nuts
- Optional accessories: color-coded (green) pre-construction bracket (AC-CMEZ-6/8-PCB), junction box (AC-CM-EZ-JBOX)

## Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
32 W	105.5 dB	32 W	105 dB	4 W	96 dB
16 W	102 dB	16 W	102 dB	2 W	93 dB
8 W	99 dB	8 W	99 dB	1 W	90 dB
4 W	96 dB	4 W	96 dB	0.5 W	87 dB
2 W	93 dB			0.3 W	84 dB

## Applications

Developed specifically for the paging and background music applications where cost, quality and fit are paramount, the CM62-EZ-II is ideal for hotels, retail stores, restaurants, airports, churches (under eave), or boardrooms. Indeed, the entire CM-EZ-II series is engineered for installations where high-efficiency and rapid installation are critical attributes. For applications requiring additional bass response, SoundTube's CM1001d-T subwoofer provides true low-end response down to 41 Hz.

## Patented Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

## Technical Data and Specification Tools

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data is available from SoundTube Entertainment or at [www.soundtube.com](http://www.soundtube.com).

Technical data and downloads include:

- EASE™ data - 3-D polar plots.
- EASE™ Address - 2-D modeling for distributed systems
- AutoDesk® Revit® software
- Tech Sheets - technical information and architectural specs for system engineers
- SoundTubeSPEC™ - Proprietary speaker placement software

## Independent Acquisition and Verification

All data for SoundTube speakers is independently collected from and verified by NWAALabs ([www.nwaalabs.com](http://www.nwaalabs.com)) using their proprietary MACH testing system. All data is collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

## Architectural Specifications

The loudspeaker transducer shall consist of one 6.5" (165 mm) low-frequency transducer and one 1" (25.4 mm) high-frequency transducer with a frequency dividing network installed in a sealed enclosure. The low-frequency voice coil diameter shall be 1" (25.4 mm). The low-frequency transducer shall have a treated fiber cone material with cloth surround. The high-frequency transducer shall be constructed of silk material using a balanced-dome configuration.

Performance specifications for a typical production unit shall be as follows: Usable frequency range shall extend from 65 Hz - 22 kHz ( $\pm 10$  dB). The loudspeaker shall be available with a selectable 25, 70.7, and 100 V and transformer bypass position. The frequency dividing network shall have a crossover frequency of 4.0 kHz. Rated power capacity shall be at least 50 watts continuous (RMS) and conform to EIA-426-B testing. Calculated maximum continuous power output at 1 meter shall be 107 dB SPL.

The backcan shall be constructed of galvanized steel with an ABS plastic baffle. The grille shall be constructed of painted steel. Shipped complete with UL-listed flex conduit clamp, color-coded tile bridge (to match color-coded backcan), grille, wire nuts, cut-out template and paint shield. The integrated in-ceiling speaker is engineered for high performance and rapid installation in plenum spaces. The unit incorporates three additional attachment points for added security, or where required by code.

Installation for the speaker shall be by two-screw, blind-mount, constant tension winged assembly and shall attach to ceiling thicknesses ranging from 0.04" to 1.6". The external wiring shall be via 4 position ceramic terminal strip accepting up to 12-gauge wire.

The maximum backcan dimensions shall be no more than 5.75" (146.1 mm) in height by 9.67" (245.6 mm) in diameter. The maximum visible dimensions shall be no more than 0.34" (8.6 mm) in height by 11.75" (298.5 mm) in diameter. The unit is factory preset to the 32 W setting in the 70.7 V mode with a tap switch located on the front baffle.

The system shall be the SoundTube CM62-EZ-II for both low- and high-impedance applications.

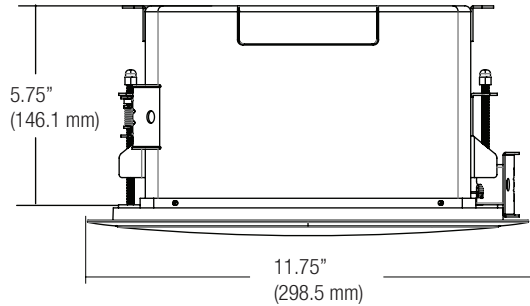
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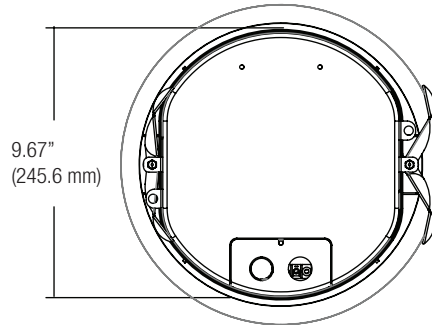
All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

## Mechanical Drawings

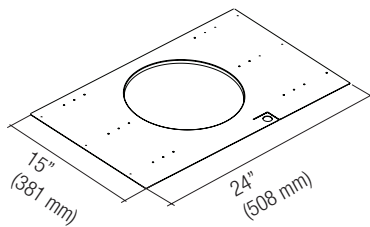
Side



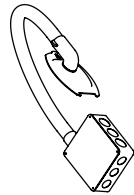
Top



### Optional Accessories

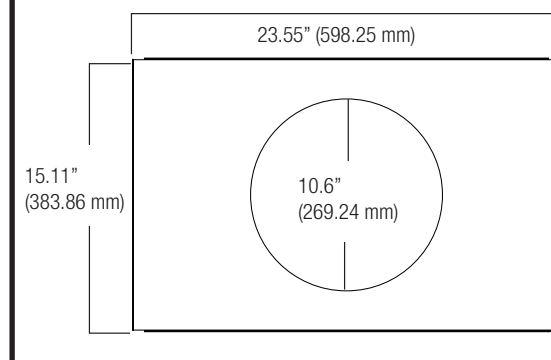


Pre-Construction Bracket  
(AC-CMEZ-6/8-PCB)

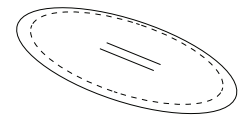


Junction Box  
(AC-CM-EZ-JBOX)

### Included Accessories



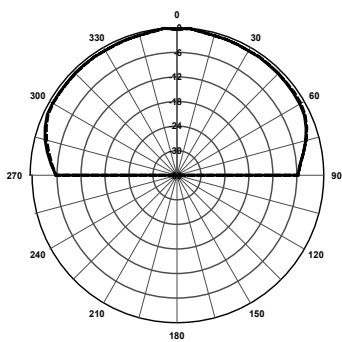
Tile Bridge



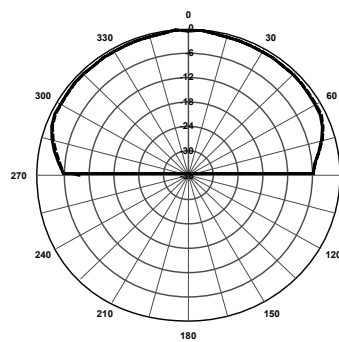
Paint Mask

## Plots

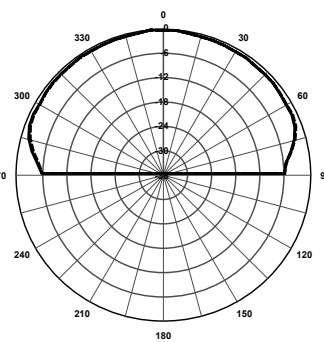
125 Hz



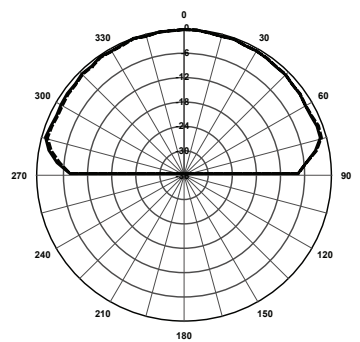
250 Hz



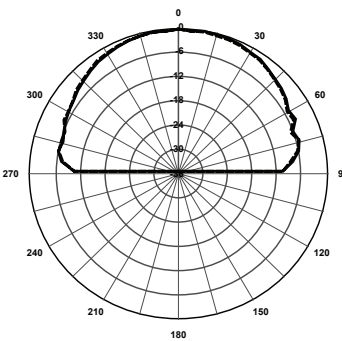
500 Hz



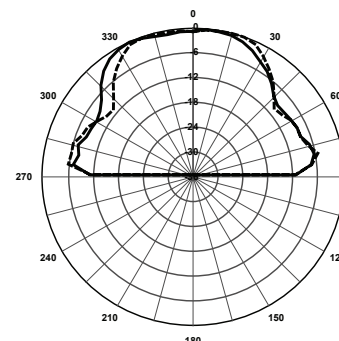
1,000 Hz



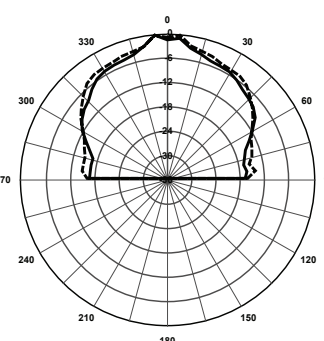
2,000 Hz



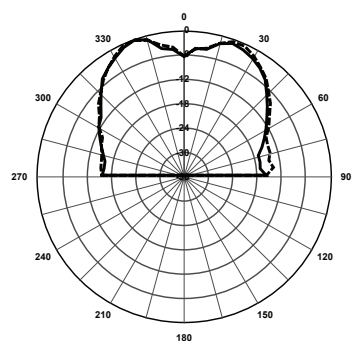
4,000 Hz



8,000 Hz

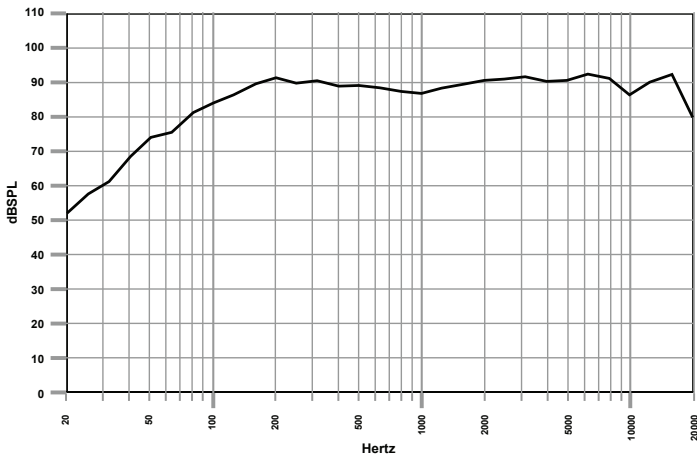


10,000 Hz

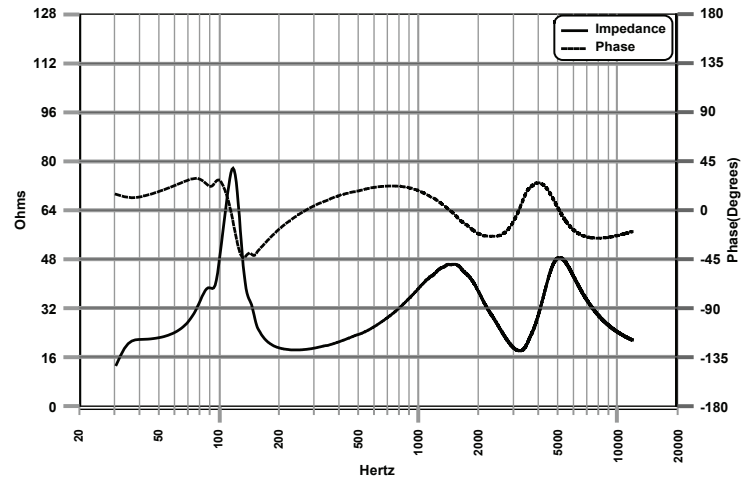


## Graphs

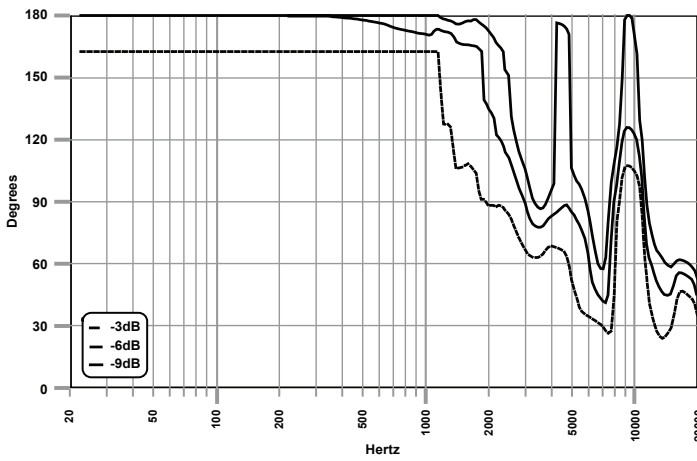
Frequency Response



Phase/Impedance Response



Vertical Beamwidth



Directivity Index (DI)

